DOCUMENT RESUME

ED 444 520 IR 020 176

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TITLE Role of Audience in Multimedia Production.
PUB DATE 2000-00-00
NOTE 9p.; In: Society for Information Technology & Teacher Education International Conference: Proceedings of SITE 2000 (11th, San Diego, California, February 8-12, 2000). Volumes 1-3; see IR 020 112.
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Audience Response; Cooperative Learning; Feedback; Foreign Countries; *Formative Evaluation; Group Activities; Higher Education; *Material Development; *Multimedia Materials; *Peer Evaluation; Preservice Teacher Education
IDENTIFIERS University of Lethbridge (Canada); Usability

ABSTRACT

This paper describes an ongoing research project that uses a set of formative evaluation activities to examine a multimedia production group project in a teacher education course at the University of Lethbridge (Alberta, Canada). The study presents the notion of peer evaluation and target population feedback as tools for scaffolding students' reconstruction of multimedia projects. Research will use data collected through students' e-mail assignments and projects collected. E-mail submissions will be classified into one of the following categories to determine the kind of suggestion: graphic design issues; usability/navigation; and functionality. In addition, the study will track changes to students' multimedia projects so that copies of the projects at various stages of development will be retained. Data collection will continue for two or three years or until sufficient data has been collected to draw valid conclusions. Contains 10 references. (MES)

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Role of Audience In Multimedia Production

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Abstract: Multimedia projects are opportunities to negotiate meaning through a variety of portrayals. However, too often multimedia projects are created with inadequate thought for how it will be perceived by others. Multimedia products at times are not user- friendly or meaningful because the creator has designed it from an egocentric perspective. This paper will describe an ongoing research project that uses a set of formative evaluation activities involving peer and target population evaluation. These activities are designed to help students involved in multimedia production to develop a greater sense of audience.

Introduction

The Faculty of Education at the University of Lethbridge (Canada) has been offering a course called Multimedia and Learning as a senior undergraduate offering for the past three years. This course is a study into the tools and educational value of multimedia. The course surveys multimedia applications, discusses the value of multimedia for learning, presents principles of design and layout, and engages the user in a team approach to development. The intent of this course is to provide educators with skills and knowledge to effectively integrate and discuss the role of multimedia in learning. It also prepares education students with experiences producing multimedia materials so that they are in a better position to use it with their own students. An important element of this course is group work. Students in this course are grouped into research and production teams. Members of the team are delegated topics to research and application tools to become familiar with, a form of reciprocal learning (Brown, Campione, Webber, and McGilly, 1992). This project culminates in the creation of a major multimedia product.

Students need to be critical developers as they select tools and representations that externalize their thoughts. This takes an understanding of the media but more importantly it requires a sense of audience. Without a sense of audience, multimedia may fail negotiating meaning. Students will create a more communicative product if they consider how others interact and view their material. To foster this sense of audience, the student teams first shares their project with another group through peer evaluations and adjustments are made to the product accordingly. The product is then field tested on a small number of individuals from the target population. The target populations are individuals who the project was designed for outside the multimedia class. Based on that experience further refinements are made. Students are then asked to list and are accountable for the suggested changes or

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criticisms of their projects. One of the difficult aspects of teaching a multimedia production course is timely and effective feedback at the formative stages of multimedia construction. The techniques of peer evaluation and target population testing are powerful incentives to make formative changes and refinements.

Background:

Peer evaluation is the process of students sharing their work with other students who have been assigned to assess it. In this particular situation it is for the purposes of formative evaluation, to improve the multimedia project that students have created. The idea is that others look and interact with a student's work and provide a commentary on the things that were good as well as things that could be improved. In reviewing the literature on peer evaluation there are two main categories. One area is the use of peer review for the purpose of teacher evaluation; the other is peer evaluation in the writing process. Teacher evaluation will not be considered here because this project is more interested in how peer evaluation influences learning. There are a fair number of references to peer evaluation into the writing process because it is a part of proof reading, having someone else to read written work. The value of this activity is rather obvious since the writers of the text knows what they want to say they often assume the reader will be able to follow their writing logic. Having someone else review writing often will reveal shortcoming in writing process and provide suggestions to improve the final product (Benesch, 1985; Bishop, 1986). The same is principle is true for multimedia. Students tend to be too close to the work and an external perspective gives the developers a sense of audience. Reviewed texts on educational assessment had few explicit references to peer evaluation and cases in which there were references to peer evaluation, they were imbedded in other approaches or glossed over. This may not be the case for all textbooks but clearly this is not a strategy that is a common component of educational assessment. It was surprising the difficulty in finding research or publications on peer assessment per se. Stiggins (1997) suggests using student as evaluators of skills and products. That author further points out that if students are to be used they need to be trained. This is also suggested as an important aspect of peer assessment in the writing process (Stern, 1992). In fact it is suggested that students come up with the evaluation criteria they will use in performance assessment. This is a strategy that is used in a variety of domains. At the University of Massachusetts for instance there has been fair amount of investigation into paired-problem solving which is a form of peer assessment (Whimbley and Lochhead, 1986). It is used in the context of Math as a way of sharing and justifying an individual's problems solving strategies with another. The partner acts as a sounding board and will use probing of challenging questions to stimulate further thought or nudge thinking in a different direction. This approach seemed to have value in the development of effective problem solving.

To understand the value of peer and target population evaluations this paper draws not only on the educational perspective but the multimedia industry as well. Although the course is not intended to train people for the multimedia industry, there are some processes used by the industry that can be adopted by educators. In the real world when companies create quality multimedia products, much planning and testing goes into the process.

Effective planning is definitely a necessity, but there is a need for testing as well and this is understood by the industry. Most companies have alpha and beta versions of their software that is distributed to potential clients to test. In contrast, education instructors' on the whole have done little with external evaluation in multimedia projects. The reason for this is multifaceted. First, multimedia projects are relatively new to education, most instructors, haven't considered multimedia forms of communication to have the same status as linguistic forms. Instructors will often address the issue of verbal and textual forms of communication in their classes and have a set of criteria for evaluating these forms of representation in assignments but don't do the same for multimedia. In addition, instructors may not think that multimedia deserves the same degree of attention because it is seen as fun rather than a serious form of communication. Another reason may be that the instructors have had few opportunities to communicate through multimedia themselves so are not sure what makes a good project and what does not. This will probably change as we have seen with the sophistication of web pages on the Internet. For instance, as people have become more discerning they have been drawn by those web pages that are more engaging and logically organized. This in turn becomes an expectation for web pages. For instance, there are numerous web sites that deal with what a good web site should be like or help designers identify common short coming in their design. Another reason is that if the multimedia industry fails to produce a quality product the consequences can be rather harsh; the audience will ignore their product and use something else, which results in a financial down turn for the company. Essentially for multimedia companies, audience is everything and companies that ignore that don't last long in the competitive market place. In education those harsh realities are removed so there is less pressure to consider the quality of a multimedia project. Case in point, provincial or state examinations for most part do not provide options for multimedia forms of communication. All these are real barriers to using multimedia and in particular using peer evaluation as a formative evaluation technique.

The Study

The research question is, if students are encouraged to make an accounting of the suggestions of others, will that be an impetus for changing their multimedia products? To address this question a number of different sources of data will be collected and tabulated. During the course on multimedia and learning, students report on their peer evaluations and the results of their target population field tests through the use of email messages. These email messages will be analyzed and categorized. This information will be put into a table, which should facilitate drawing inferences and making conclusions. Students' multimedia projects will be collected at the various stages of development. Using their projects as references one can tell a story of how their projects changed over time. The researcher plans to use students' multimedia projects as exemplars of change. Each group submits a copy of their projects before peer and target population evaluations and then again after each form of evaluation.

This study presents the notion of peer evaluation and target population feedback as tools for scaffolding students' reconstruction of multimedia projects. This is a work in progress. It is hoped that researchers and instructors will be able to use the principles coming out of this research and apply those to their own multimedia productions or related courses.

The results of this research address the value of audience in changing student multimedia constructions and suggest implications for other courses.

Data and analysis:

Ongoing data collection will begin in January 2000. This will continue for two or three years or until sufficient data has been collected to draw valid conclusions. There are two kinds of data that the study will use, data collected through email assignments from offerings of the course and projects collected. Students' email messages will be categorized and tabulated (as seen Figure 1). The contents of student email submissions will be classified into one of the following categories to determine the kind of suggestions made:

- Graphic Design issues: This category will cover issues like style, color, placement of images, text, font size, and the over look and feel of the project.

- Usability/navigation: This category covers issues of interactivity, the degree to which it is user friendly. This will be reflected in comments relating to how the user navigates through the project or how the project is structured. For instance, is it clear how to get from one part to the next, can users get to parts of the project they want to, is there a need for further links, etc.

- Functionality: Functionality will deal with more fundamental questions. Does it accomplish its purpose? Is it worthwhile?

It should be noted that the evaluators are not given any explicit criteria or categories to evaluate products, although these categories are covered in class in regards to developing good multimedia. Evaluators are asked to identify those aspects of the project that were good and those things that might be improved upon.

Once a comment has been categorized it will be determined if it is a positive comment or a suggestion for change. As part of an assignment for the course, students will be held accountable for each of the suggested changes made by peers or the target population. They will either be expected to reflect that change in their work or justify why they did not. A further category will be the justifiable nonchanges. These would be changes that are identified by the project group as being worthy to pursue but for one reason or another (time, resources, expertise) are not able to implement. This does not suggest students will be compelled to make changes. Students do not need to make changes to get credit for assignments. However, they are expected to address the suggestions either by indicating the suggestions are not necessary, the change is a justifiable nonchange, or they see the value of the change and make the change accordingly. Tabulating this information will provide data on the usefulness of peer evaluation for changing the multimedia projects. As an after thought there may be an alternative to email, that is online databases. This too might facilitate summarizing the data.

In addition this study will track changes to students multimedia projects so copies of students' projects at various stages of development will be retained. These juxtaposed will the tabulated data will help tell the story of how change takes place. The study will use these projects as exemplars in presentations or as screen displays in reports. Table 1 illustrates a tentative form that will be used to collect and tabulate the data that will be collected and categorized.

Role of audience in changes to usability

Multimedia Course				Usability			
	Groups	Positive Comments	Peer Suggestions	Target Suggestions	Justified Nonchanges	Self-evaluation Changes	Chai Sugg
Peer Evaluations							
	Group1	2	4	3	1	1	
	Group 2	3	4	2	1	0	

Table 1: This is a sample data collection form which will be used to tabulate results from student peer and target population evaluations on the category of usability. Each category would a have similar table associated with it.

There are two ways students may develop a greater sense of audience. One is that they see the value of having others review their work. This might be measured to the degree they think valuable information will come form peer and target population involvement in the production process. Another measure of a sense of audience is, the extent student creators are able to take the perspective of others in the production process. This is a difficult factor to collect information on. One way address this issue is to determine to what extent peer and target population comments are useful in future project development? Does the experience actually raise an awareness of a sense of audience for participating students? This will be difficult to document or track over the long term. The nature of these suggestions may be endemic to a particular project, so to have students demonstrate what they have learned through the development of a different project may not be valid. However, perhaps one can infer this kind of transfer if students are able to identify the principles that they have learned from their peer evaluations. So an additional question will be posed to students for them to identify the principles they have learned from the peer and target population evaluations. It is hoped that through the course content student will have the language to articulate these principles. Another question will be asked at the end of the session to see to what extent they feel target and peer evaluation is a part of the evaluation process.

Findings

The information from Table 1 will be used to identify patterns in the data. For instance, the measure of student sense for audience comes from either a low number of changes being suggested or a high percentage of the suggested changes being acted on. The number of changes over suggestions should be high, if students have a good sense of audience with justified nonchanges taken into account. In other words, groups that have been told there are problems with their projects should make changes to accommodate those suggestions. However, there will be expected disagreements from time to time in terms of suggestions made and the degree to which the creators of the project sense it is an issue. There are two possible explanations, either the creator group ignores the perspective of the audience or the evaluator group are making unreasonable suggestions. Other patterns may

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emerge from this table as well. For instance the number of positive comments might be viewed as an overall evaluation of the project. Looking at the differences in the number and type of suggestions between the peer evaluation and the target population would also be interesting information to collect. Identifying further changes through self-evaluation might further provide evidence of a heightening sense of audience. There is no need for a control group because each project is a control in the sense that before the target population and peer evaluation, the project is meant to be in a finished state. So the control is the state of the project before peer and target evaluation have been accomplished. The numbers that will be collected are not sufficient to do any kind of inferential statistics so this becomes a qualitative study

There are no definitive results since this a study in progress. However, data from previous years were put into the table to test the categorization scheme. The pilot study data was obtained from a manually maintained email archive. Although the data was sketchy and was not categorized as finely as this proposal suggests, patterns began to emerge. One pattern was that through peer evaluation and target evaluation, numerous suggestions for change were made in all categories but functionality. Another result was that the production group acted on most suggestions. One might argue that these changes were stimulated not by peer evaluation but by the nature of the assignment. Controlling for that would be difficult but the course assignments could be setup so that they don't get any credit for addressing the suggested changes. However this in turn might skew the degree to which the students look seriously at suggested changes. Giving students credit for making changes is thought to stimulate them to be more sensitive to the issue of audience. Suggestions not acted on may have fallen into different categories. First the development group may not have shared the value of these suggestions. Alternatively, the suggestions may have fallen into the justified nonchange which would suggest that the development group realized the value of the comment but did not have resources or time to act on it. It was interesting to note that were only one or two suggestions in terms of functionality. However, through understanding the context this result becomes explainable. Suggestions regarding functionality address the very intent of the project. Functionality addresses the project's purpose, was it successful achieving its purpose or was the purpose useful? The peer or target evaluators, knowing that by this time the production team had gone to great lengths to create the product to date may have suppressed these issues. Instructional interventions are now being considered to accommodate for this. For instance, if students went through a peer review early in the process before production commenced as a sort of proof of concept, it would be interesting to see the number of comments that emerge regarding the functionality of the project. Another explanation is that the audience viewed the projects as being functional. A more systematic data collection process should provide a better indication of how student projects change and why. At this point it may be premature but the pilot study suggests that through greater audience appreciation (peer and target evaluation) many useful changing can be made to multimedia projects.

Conclusions

Designing and developing multimedia projects may involve different skills and engage different learning styles than that used in the writing process. However, because both processes involve creating a

product that will negotiate meaning and facilitate communication with others, both approaches can benefit from a sense of audience. In this case the role of audience comes through student assignments that involve having multimedia projects reviewed by peers as well as individuals from the target population. This study reported an ongoing project that documents the role of audience on changes to students' multimedia projects. It is speculated that feedback from an audience is a powerful influence on implementing changes to multimedia projects. On a broader note it is thought that the audience's perspective differs from the creators perspective and this information can help make multimedia projects more useful. With the current emphasis in the curriculum on students creating alternative ways of presenting and portraying ideas, students need a better sense that meaning is a negotiated issue. Using techniques like peer and target evaluations to improve multimedia projects will highlight the importance of this.

References

Anderson, R. S. (1998). Why talk about different ways to grade? The shift from traditional assessment to alternative assessment. *New directions for Teaching and Learning*. 74, pp. 5-16, Summer.

Benesch, S. (1985). Metaresponse: A hidden benefit of peer writing instruction. Paper presented at the Annual Meeting of the National Council of Teachers of English Spring Conference, Houston TX: March 28-30.

Bishop, W. (1986). Research, theory, and pedagogy of peer writing groups: An annotated bibliography. *ERIC* Clearinghouse document No. 131.

Brown, A. L., Campione, J. C., Webber, L. S., and McGilly, K. (1992). Interactive learning environments: A new look at assessment and instruction. In Gifford, B. R. and O'Connor, M. C. (Eds.), *Changing assessments: Alternative views of aptitude, achievement and instruction*. Boston: Kluwer Academic Publishers.

Druin, A. and Solomon, C. (1996). *Designing multimedia environments for children*. New York, NY: John Wiley & Sons.

Kristof, R. & Satran, A. (1995). *Interactivity by design*. Mountain View, CA: Adobe Press.

Stern, C. (1992). Student practicing self-assessment. *Paper presented at the Annual Meeting of the Conference on College Composition and Communication*, Cincinnati, OH: March 19-21.

Stiggins, R. J. (1997). *Student-Centered Classroom Assessment*. Columbus, MA: Prentice Hall.

Veal, M. L. (1995). Assessment as an instructional tool. *Strategies*, 8(6), pp. 10-15, Mar-Apr.

Whimbley, A. and Lochhead, J. (1986). *Problem solving & comprehension*. Hillsdale, NJ: Lawrence Erlbaum.